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BAYER MATERIAL SCIENCE LLC			DANIELS, MATTHEW J	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/733,657	PYLES ET AL.
	Examiner	Art Unit
	Matthew J. Daniels	1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 09 April 2007.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-22 and 24-28 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-22 and 24-28 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: A vertical line appears above the formula in Claim 1, (b)(iii). Because of the structure of the claimed molecule, it cannot be a bond to CH₂, and thus appears to be a stray mark. Appropriate correction is required to remove the mark if it is not intended to be a bond.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. **Claims 1 and 10** are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, and 7 of U.S. Patent No. 6949127. Although

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the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons:

Both applications claim treating an article comprising contacting or treating with a composition comprised of at least an additive (the surfactants in Claim 2 of the '127 patent would also act as "mold release agents", see instant claim 1), water, a carrier having the claimed formula (identical in both cases), and a diol (referred to as the leveling agent in the '127 patent, also see Claim 7 for particular diols which are claimed in instant Claim 7).

3. **Claims 1, 20, and 27** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/733,111, now USPN 7175675. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims contain claims to a thermoplastic article selected from the group consisting of pellets and strands (instant Claim 20, Claim 1 of the '111 application), immersing or contacting the article with a treatment composition comprising a dye (an IR absorber or an optical brightener, instant Claim 1, is a "dye", alternatively see instant Claim 27), at least one carrier (instant Claim 1, when "m" is 1, the compound is the same as the '111 application), maintaining contact or immersion for sufficient time, and removing the article from the bath.

4. USPN 6749646 and USPN 6994735 have been considered for double patenting, but do not claim any diol in the treatment composition (see instant Claim 1, ingredient iv of the treatment composition). USPN 6949127 has been considered for double patenting, but is

directed to a product. Applications 11/417,379 and 11/417,720 have also been considered for double patenting.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Note that the 10/733,111 application has the same inventive entity as this application, and is thus not “by another”.
6. **Claims 1-19 and 27** are rejected under 35 U.S.C. 102(e) as anticipated by Pyles (WO 03/083207). The applied reference has a common assignee/inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Additional rejections under 35 USC 102(e) over USPN 6733543 or USPN 6949127 are deemed to be cumulative over this rejection because all three documents claim domestic priority to 10/106,788 having a filing date of 26 March 2002.

As to Claim 1, Pyles teaches a method of treating a plastic article comprising:

- (a) providing an article (inherent)
- (b) contacting the article with the claimed composition (page 5, lines 1-35)
- (c) maintaining contact to form a treated article (page 9, line 17)
- (d) removing (inherent)

As to Claim 2, see page 9, line 6.

As to Claims 3-4, see page 9, line 6.

As to Claim 5, see page 9, line 13.

As to Claims 6-7, see page 5, lines 1-35.

As to Claims 8-13, see pages 5 and 7.

As to Claims 14-19, see page 5, line 34 and page 3.

As to Claim 27, see page 6.

Ordinarily, prior art rejections are confined strictly to the best available art. However, exceptions, however, may properly be made where the most pertinent reference seems likely to be antedated by a declaration. See MPEP 706.02(I). In this case, the reference and the application share at least one inventor and appear to have a common assignee, and the reference appears likely to be antedated. The following rejections are also presented to expedite prosecution.

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7. **Claims 1, 3-6, 8, 12, 13, 15-19, 22** are rejected under 35 U.S.C. 102(b) as anticipated by Kawashima (USPN 5015523). **As to Claim 1**, Kawashima teaches a method of treating a plastic article comprising:

- (a) providing a plastic article that is a thermoset or thermoplastic (5:55-7:16)
- (b) contacting at least a portion of the surface of the plastic article with a treatment composition comprising:
 - (i) an additive (7:59-8:28)
 - (ii) water (9:60-62)
 - (iii) at least one carrier (9:64, 8:6-24)
 - (iv) a diol (9:67)
- (c) maintaining the plastic article in contact with the treatment composition for a period of time sufficient to form a treated article (8:39)
- (d) removing the treated article from contact with the treatment composition

Kawashima does not explicitly teach an additive that is a UV stabilizer, an optical brightener, a mold release agent, an antistatic agent, a thermal stabilizer, and IR absorber, or an antimicrobial agent. However, Kawashima teaches a variety of additives that would inherently function as the additives listed above. For example, fluorine surfactant (8:26) would perform the function of a mold release agent. Many of the polymers (7:59-68) would inherently absorb IR. And the UV absorber (8:1-5) would perform the function of a UV stabilizer and/or and IR absorber. **As to Claims 3-5**, Kawashima dips and sprays lenses (8:39) of polyalkyl methacrylate (1:35, PMMA is a polyalkyl methacrylate). **As to Claims 6, 12, and 13**, Kawashima teaches at least one of the claimed substances (8:6-24). **As to Claim 8**, Kawashima teaches at least an

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anionic or non-ionic surfactant (7:66 and 8:25-28). **As to Claim 15**, Kawashima teaches polycarbonates which would be either thermoplastic aliphatic or aromatic polycarbonates (5:62-6:3). **As to Claims 16-19**, see lenses from diethylene glycol bisallyl carbonate (5:20, 6:1). **As to Claim 22**, Kawashima teaches a photochromic dye applied to the treated plastic article (24:30-45).

8. **Claims 7, 10, and 11** are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kawashima (USPN 5015523). Kawashima teaches the subject matter of Claims 1 and 6 above under 35 USC 102(b). **As to Claim 7**, Kawashima teaches a carrier which may be n-butyl Cellosolve, and it is the Examiner's position that this disclosed compound reads on the claimed n-butyl (R1) and H (R2). However, in the alternative, Kawashim clearly teaches a wide range of compounds that would suggest the claimed species (8:6-24). **As to Claims 10 and 11**, Kawashima teaches diethylene glycol (7:47-50), and in the alternative that this cannot be considered a diol by its incorporation with acrylates or methacrylates (7:46-47), Kawashima clearly teaches ethylene glycol (8:10) which would suggest other similar glycols.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 2 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima (USPN 5015523). **As to Claim 2**, Kawashima discloses the coating solution maintained at a temperature of 20 C (68 F) (21:40-45), which is substantially room temperature. The claimed 25 C (77 F) is also at substantially room temperature, and would have been *prima facie* obvious. Alternatively, Kawashima discloses that a temperature of 60 C is required to semi-cure the coating (21:45-50), and the ordinary artisan would have recognized that any temperature below the curing temperature could be used. **As to Claim 9**, although silent to the particular amount of surfactant, Kawashima clearly teaches that the surfactant should be used in an amount sufficient to reduce surface tension and obtain a smooth coating surface (8:24-28). The particular amount of surfactant therefore represents a result effective variable that it would have been obvious to optimize. See MPEP 2144.05 II and *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

10. **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima (USPN 5015523) in view of Ono (USPN 5914193). Kawashima teaches the subject matter of Claim 1 above under 35 USC 102(b). **As to Claim 14**, Kawashima appears to be silent to the plastic article containing the claimed substances or the article having a dye applied prior to treatment. However, Ono teaches a lens having a photochromic dye embedded in the lens or coated on top (2:30-48). Ono also applies a coating over top of the photochromic material (21:1-4). It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Ono into that of Kawashima because it is obviously desirable to have photochromic dyes to shield the wearer's eyes from sunlight.

11. **Claims 20, 21, and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima (USPN 5015523) in view of Hurley (USPN 5846607). Kawashima teaches the subject matter of Claim 1 above under 35 USC 102(b). **As to Claims 20 and 21**, the Examiner asserts that a lens (Kawashima) could fulfill the limitation drawn to a pellet. However, in the alternative, Hurley teaches that it is known to provide an additive coating comprising a pigment onto thermoplastic pellets (4:14-20), and to subsequently to melt the treated pellet to form a molten composition and introducing the molten composition into a mold (these aspects are inherent in injection molding, 11:7). It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Hurley into that of Kawashima because doing so would (1) allow incorporation of the pigments or other materials into the body of a product and (2) eliminate defects such as inhomogeneity which are especially apparent when color is avoided (3:57-61). **As to Claim 27**, Hurley teaches dyes (7:1-8) which would fulfill the claimed condition.

12. **Claim 24** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima (USPN 5015523) in view of Daughenbaugh (USPN 6506864). Kawashima teaches the subject matter of Claim 1 above under 35 USC 102(b). **As to Claim 24**, Kawashima teaches contacting the composition with a filter in order to isolate a substantially additive-free liquid (water). Kawashima appears to be silent to (a) the particular order of adding the additive and filtering and (b) the activated carbon. Daughenbaugh teaches that (b) it is known to filter through activated carbon (16:35-37) and rearrangement of the order of steps is generally considered to be *prima*

facie obvious in the absence of unexpected results. Here, it would have been obvious to add the additive after filtering in order to avoid filtering out the additive.

13. **Claim 25** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima (USPN 5015523) in view of Daughenbaugh (USPN 6506864). Kawashima teaches the subject matter of Claim 1 above under 35 USC 102(b). **As to Claim 25**, Kawashima teaches preparation of a mixture of watter, carrier, and diol (columns 7-9), but appears to be silent to the introducing of the additive into a filter and passing the mixture over the additive through the filter. However, firstly the claimed order of steps appears to be met by a rearrangement in the order of steps of Kawashima. Secondly, the claimed method of applying an additive is taught by Johnson (USPN 2302552). Johnson provides specifically a filter with an impregnated addition agent which is absorbed into the fluid (page 1, left column, lines 37-55). It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Daughenbaugh into that of Kawashima in order to provide an effective additive concentration to a fluid particularly in cases where the additive is only slightly soluble in the fluid (page 1, left, lines 37-55), and in order to avoid precipitated amounts of additive.

14. **Claim 26** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima (USPN 5015523) in view of Dusenbury (USPN 3045315). Kawashima teaches the subject matter of Claim 1 above under 35 USC 102(b). **As to Claim 26**, Kawashima appears to be silent to the claimed immersion tank, but Kawashima does teach immersion (8:39). Dusenbury teaches that it is known to immerse articles in a bath where the treatment composition is introduced into

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the immersion tank through a plate having a plurality of perforations (Figure). It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Dusenbury into that of Kawashima in order to maintain a constant temperature and liquid level (1:10-52).

15. **Claim 28** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima (USPN 5015523) in view of Brown (USPN 4977029). Kawashima teaches the subject matter of Claim 1 above under 35 USC 102(b). **As to Claim 28**, Kawashima appears to be silent to the rinsing of the treated article. However, rinsing of lenses in water is known. See Brown, 4:42-48. It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Brown into that of Kawashima in order to remove additional materials, dust, any solvents in the coating, and to clean the coating before any additional treatments.

Response to Arguments

16. Applicant's arguments filed 9 April 2007 have been fully considered but they are not persuasive. The arguments appear to be on the following grounds:

- a) Surfactants and mold release agents are compounds that provide different functions. Because the art recognizes the substantive difference between the two, the rejection over the '127 patent is untenable.
- b) Dye is a substance used to color materials. IR absorber is a substance that absorbs EM radiation in the range of 0.78 to 300 microns and is longer than visible light. An optical

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brightener absorbs IR and re-emits it. Neither is a "dye". Since the art recognizes the differences, the rejection over the '111 application, now the '675 patent, is untenable.

c) Pyles discloses a process for tinting with a dye bath. There is no disclosure of the instant additives.

d) While the copolymer may contain a UV absorber and surfactant, neither is disclosed as a component of a treatment composition that contains water, carrier, and diol, as required.

e) Dependent claims are believed to be patentable by their dependence on Claim 1.

17. These arguments are not persuasive for the following reasons:

a,b) Applicants' remarks appear to be premised on definitions of the cited materials, but do not show or dispute that the materials do not overlap in function. For instance, a surfactant is still interpreted to provide the claimed function of releasing from a mold. A dye is still interpreted to provide absorption or brightening. The arguments are not commensurate with the scope of the claims, which is not limited to any particular type of IR absorber or brightener, and it has not been shown that the cited additives do not provide the claimed functions. If the additives provide the cited function, then they inherently meet the definition of that additive as claimed.

c) With regard to the Pyles reference, it is submitted that the dye of Pyles would provide at least one of the claimed functions, particularly IR absorption. Applicants' remarks do not appear to show otherwise. If the additives provide the cited function, then they inherently meet the definition of that additive as claimed.

d) Applicants' remarks appear to dispute the presence of water, carrier, and diol in the primer coating solution of the primary reference. It is submitted that the primer coating solution

preferably contains 5-40% water (9:62). Cellosolve (9:64), and particularly the Cellosolves listed at 8:11-14, anticipate the claimed carrier. Ethylene glycol (9:67), also known as ethane-1,2-diol, is an aliphatic diol having the formula C₂H₄(OH)2. Therefore, "treatment composition" containing the materials cited by the independent claim is anticipated by the Kawashima.

The materials described at 8:6-24 are for use with primer coatings in order to control various characteristics of the mixture. Therefore, it is submitted that they are part of the "treatment composition". Likewise, even if contained in a polymer the UV absorber and surfactant are part of the "treatment composition". No particular order of mixing is recited that precludes a mixture containing the claimed components.

e) Dependent claims have not been particularly addressed, and therefore in view of the rejection of Claim 1, these additional rejections are maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Daniels whose telephone number is (571) 272-2450. The examiner can normally be reached on Monday - Friday, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJD

MJD 7/20/07

CK
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